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Title: JP2000251890A2: NEGATIVE ELECTRODE FOR NONAQUEOUS ELECTROLYTE SECONDARY BATTERY, AND SECONDARY BATTERY USING THE SAME

Country: JP Japan
Kind: A2 Document Laid open to Public inspection

Inventor: TAJIRI HIROYUKI;
 YADA SHIZUKUNI;
 KIKUTA HARUO;

Assignee: OSAKA GAS CO LTD
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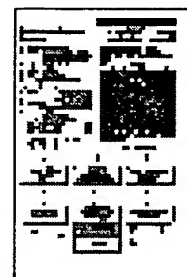
Abstract: **Problem to be solved:** To provide an electrode of high capacity, capable of easily enhancing a density without crashing an active material particle, prevented from decomposition of an electrolyte to exhibit superior potential smoothness, and provide a secondary battery using the electrode.

Solution: In this negative electrode, a carbon material prepared by mixing at least one kind selected from among a group of artificial graphite and natural graphite, and a carbon material having a volatile component in its surface or its inside, and by firing a mixture provided therein is used as an active material particle, resin is used as a binder, metal is used as a current collecting material, and the electrode has 20-35% of porosity, 1.20-1.60 g/cm³ of electrode density and 400 mAh/cm³ or more of electrode capacity.

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PATENT ABSTRACTS OF JAPAN(21) Application number: **11050122**(51) Intl. Cl.: **H01M 4/58 H01M 4/02 H01M 10/40**(22) Application date: **26.02.99**

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states:(71) Applicant: **OSAKA GAS CO LTD**(72) Inventor: **TAJIRI HIROYUKI
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(74) Representative:

**(54) NEGATIVE ELECTRODE
FOR NONAQUEOUS
ELECTROLYTE
SECONDARY BATTERY,
AND SECONDARY BATTERY
USING THE SAME**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide an electrode of high capacity, capable of easily enhancing a density without crashing an active material particle, prevented from decomposition of an electrolyte to exhibit superior potential smoothness, and provide a secondary battery using the electrode.

SOLUTION: In this negative electrode, a carbon material prepared by mixing at least one kind selected from among a group of artificial graphite and natural graphite, and a carbon material having a volatile component in its surface or its inside, and by firing a mixture provided therein is used as an active material particle, resin is used as a binder, metal is used as a current collecting material, and the electrode has 20-35% of porosity, 1.20-1.60 g/cm³ of electrode

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